



Department of Biodiversity,
Conservation and Attractions



Biodiversity and
Conservation Science

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Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

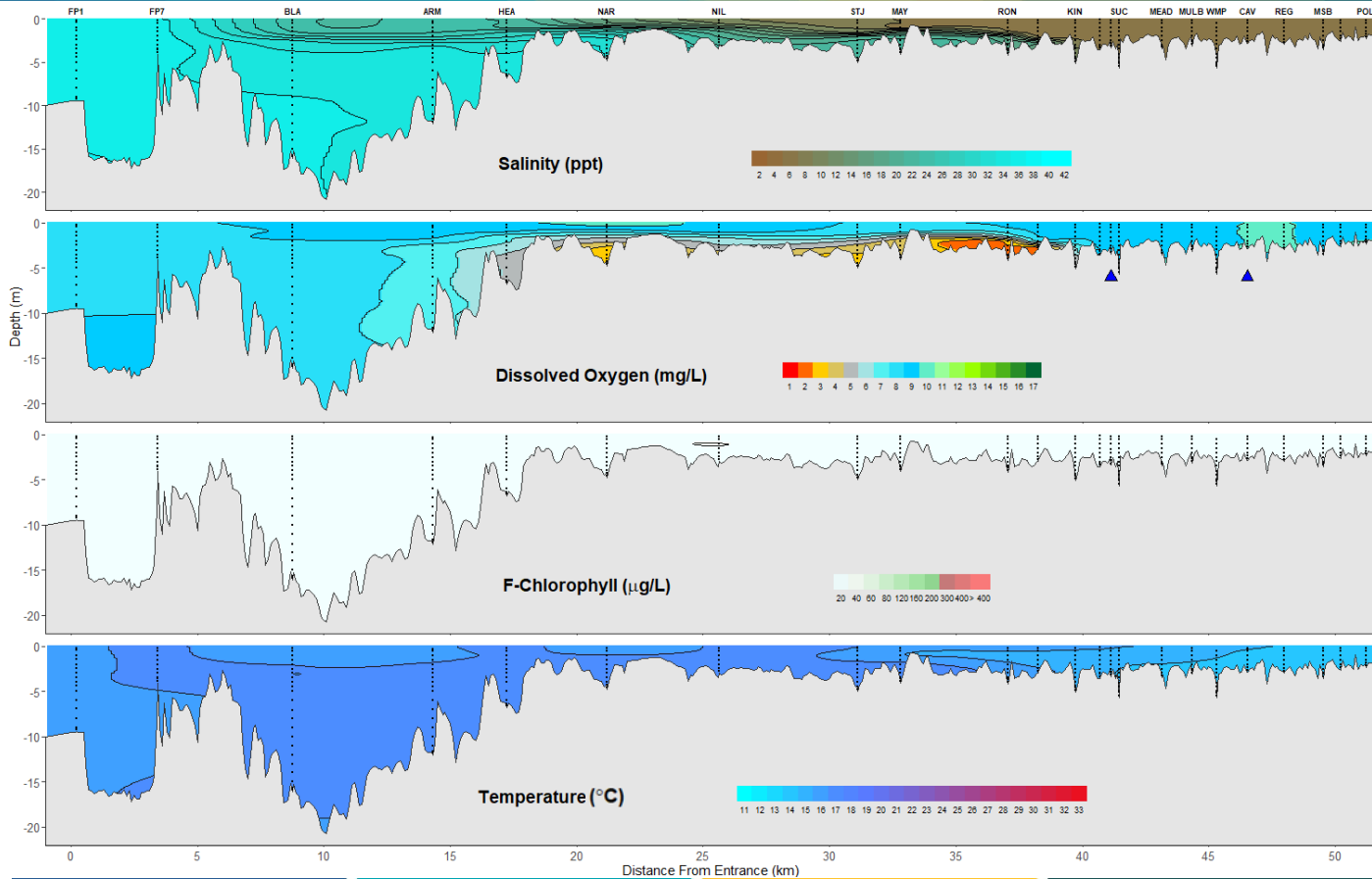
Lower Swan Canning Estuary to Upper Swan Estuary

14th August 2023

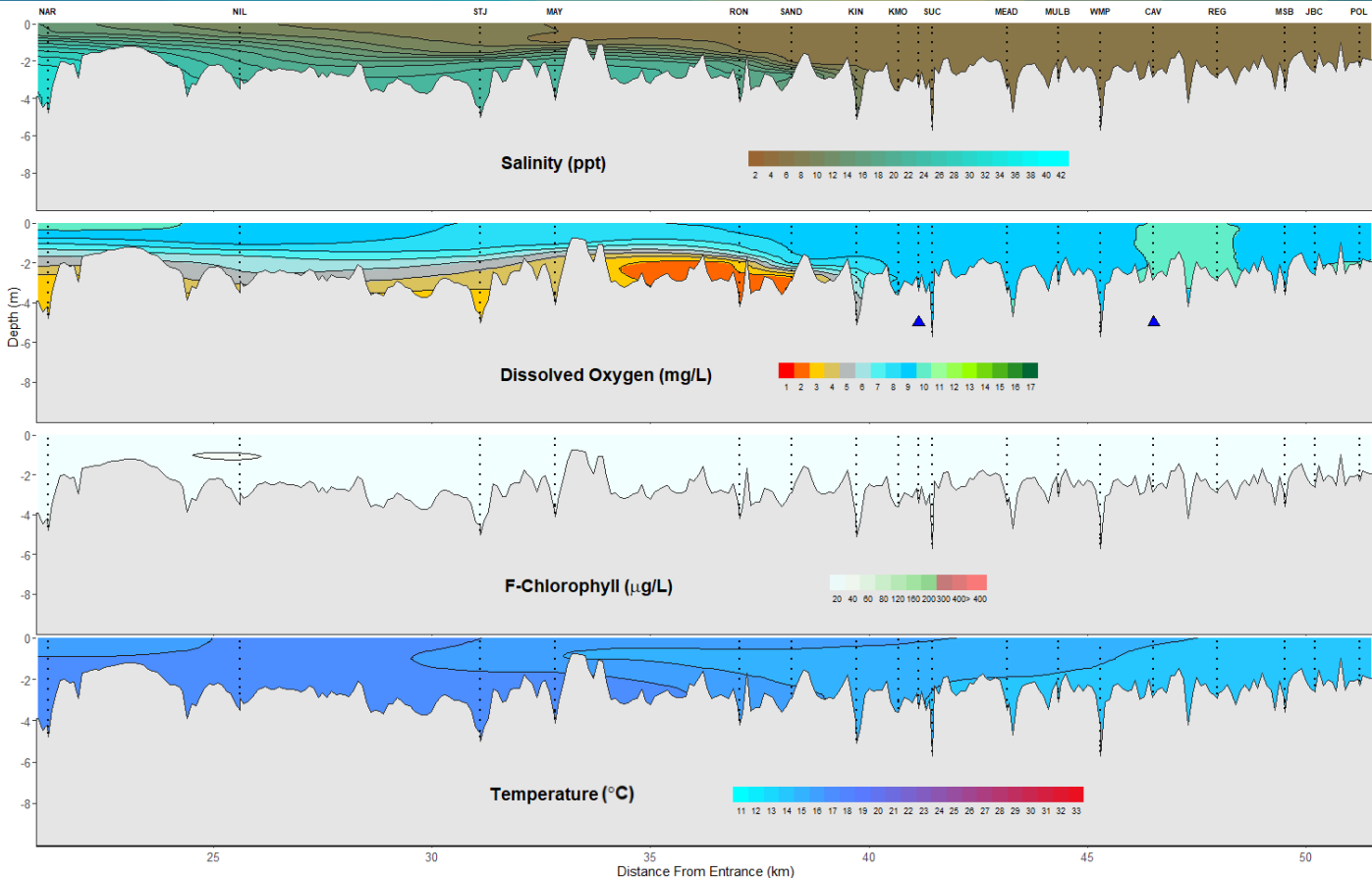
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Swan Canning Estuary - Water Quality Profiles – 14th August 2023



Swan Canning Estuary - Water Quality Profiles – 14th August 2023



Date: 14th August 2023

Weather & tide conditions: Conditions were overcast with a predominantly northerly breeze of up to 6.6 knots. The predicted tides at Barrack St were 1.16 m at 9:36 am (high tide) and 0.67 m at 8:07 pm (low tide). Perth recorded 7.8 mm of rainfall in the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford and Caversham oxygenation plants were both operable but not triggered to provide oxygen in the 24 hours prior to sampling.

Lower Swan Canning Estuary (FP1 to NAR): The Lower Swan Canning Estuary was saline from FP1 to FP7 and brackish over saline between BLA and NAR. Waters were oxygenated to well oxygenated, except bottom waters at NAR which were low in oxygen. Chlorophyll fluorescence was low and water temperatures ranged from 15.1 °C to 16.6 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish. Surface waters were oxygenated or well oxygenated and bottom waters were low in oxygen between STJ to MAY and hypoxic at RON. Chlorophyll fluorescence was low and water temperatures ranged from 14.6 °C to 16.8 °C at the time of sampling.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was brackish, except from KIN to SUC and at JBC where waters were fresh over brackish. Waters were oxygenated or well oxygenated, except bottom waters at SAND which were low in oxygen. Chlorophyll fluorescence was low and water temperatures ranged from 13.5 °C to 15.5 °C.

NB: Profile plots are visual interpolations of measured parameters only. Detailed data are available at wir.water.wa.gov.au.

Oxygenation Plant Operational Status:

- ▲ Operating for part or all of the 24 hours prior to sampling
- ▲ Operable but not triggered to operate in the 24 hours prior to sampling
- ▲ Inoperable for part or all of the 24 hours prior to sampling

Definitions:

Salinity – fresh <5, brackish 5-25, saline 25-35, hypersaline >35
Dissolved oxygen – well oxygenated >6 mg L⁻¹, oxygenated >4-6 mg L⁻¹, low oxygen >2-4 mg L⁻¹, hypoxic 0.5-2 mg L⁻¹, anoxic <0.5 mg L⁻¹
Chlorophyll fluorescence (mod/high flow): low < 50 µg L⁻¹, moderate 50-150 µg L⁻¹, high 150-400 µg L⁻¹, extreme > 400 µg L⁻¹